Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

1. Claims 1-24 (Cancelled)

25. (Withdrawn) A compound having a formula:

$$R\text{-}SO_n\text{-}Z\text{-}CO\text{-}Y,$$

wherein:

R is an alkyl group having 6-20 carbon atoms or an alkyl group having 6-20 carbon atoms interrupted by at least one aromatic ring;

Z is a radical selected from the group consisting of $-CH_2-$, -O-, -NH-, two of these radicals coupled together, and -CH=CH-;

Y is selected from $-NH_2$, $O\text{-}CH_2\text{-}C_6H_5$, and $-CO\text{-}CO\text{-}O\text{-}CH_3$; and

n is 1 or 2.

26. (Withdrawn) The compound according to claim 25, wherein said alkyl group is a branched alkyl group.

27. (Withdrawn) The compound according to claim 25, wherein R is an alkyl group having 8, 10, or 12 carbon atoms.

28. (Withdrawn) The compound according to claim 25, wherein Z is not $-CH_2-$ when R is an alkyl group having 12 carbon atoms, Y is $-NH_2$, and n is 2.

29. (Withdrawn) The compound according to claim 25, wherein Y is not $-NH_2$ when R is an alkyl group having 12 carbon atoms, Z is not $-CH_2-$, and n is 2.

30. (**Currently Amended**) A method of treating an animal with a ~~**pathogenic**~~ mycobacterial infection, comprising administering an effective amount of a compound of formula I to the animal:

$$R\text{-}SO_n\text{-}Z\text{-}CO\text{-}Y \qquad I$$

wherein:

R is selected from the group consisting of alkyl groups having ~~**6-20**~~ **6-10** carbon atoms, unsaturated hydrocarbon groups having ~~**6-20**~~ **6-10** carbon atoms, or alkyl groups having ~~**6-20**~~ **6-10** carbon atoms interrupted by at least one aromatic ring;

Z is ~~**a radical selected from the group consisting of**~~ $-CH_2-$ **;** ~~**, $-CH_2CH_2-$, -NH- and -CH=CH-;**~~

Y is selected from the group consisting of $-NH_2$~~**, $-O-CH_2-C_6H_5$, -CO-CO-O-CH_3,**~~ and $-O-CH_3$; and

n is 1 or 2[[.]]**;**

and wherein, the mycobacterial infection is caused by a mycobacterium selected from the group consisting of *Mycobacteria tuberculosis*, drug resistant *M. tuberculosis*, *M. bovis*, *M. leprae*, and *M. paratuberculosis*.

31. (**Currently Amended**) The method of claim 30, wherein R is alkyl groups having ~~**6-20**~~ **6-10** carbon atoms interrupted by an aromatic ring to give ortho-, meta-, or para-disubstitution.

32. (Cancelled)

33. (Previously Presented) The method of claim 30, wherein R is a branched alkyl group.

34. (Previously Presented) The method of claim 30, wherein R is an n-alkyl group.

35. (Previously Presented) The method of claim 30, wherein n is 1.

36. (Previously Presented) The method of claim 30, wherein n is 2.

37. **(Cancelled)**

38. (Previously Presented) The method of claim 30, wherein Y is $-NH_2$.

39. (**Currently Amended**) The method of claim 30, wherein: R is $-(CH_2)_9-CH_3$, n is 1, Z is ~~$-CH_2-$~~ $\underline{-CH_2-}$ and Y is $-NH_2$.

40. (**Currently Amended**) The method of claim 30, wherein: R is $-(CH_2)_7-CH_3$, n is 1, Z is ~~$-CH_2-$~~ $\underline{-CH_2-}$ and Y is $-NH_2$.

41. **(Cancelled)**

42. (Previously Presented) The method of claim 30, wherein: R is $-(CH_2)_9-CH_3$, n is 2, Z is $-CH_2-$, and Y is $-NH_2$.

43. (**Currently Amended**) The method of claim 30, wherein: R is $-(CH_2)_7-CH_3$, n is 2, Z is ~~$-CH_2-$~~ $\underline{-CH_2-}$, and Y is $-NH_2$.

44. **(Cancelled)**

45. **(Cancelled)**

46. (Previously Presented) The method of claim 30, wherein the animal is selected from the group consisting of ruminants and horses.

47. (Previously Presented) The method of claim 46, wherein the ruminant is selected from the group consisting of sheep and cattle.

48. (Previously Presented) The method of claim 30, wherein the animal is human.

REMARKS

Applicants would like to thank Examiner Epperson for the courtesy of the interview conducted on February 23, 2007, involving counsel for Applicants and co-inventor, Dr. James D. Dick, Ph.D. At the interview, amendments to the claims with respect to the range of organisms and chemical structure were discussed. The Examiner agreed to consider the effect of claim amendments on the grounds of rejection.

Claims 25-31 and 33-48 are currently pending in this application. Claims 25-29 are withdrawn from consideration, and claims 30, 31, and 33-48 are rejected. Claims 37, 41, 44, and 45 are cancelled, and claims 30, 31, 39, 40, and 43 are amended herein. Claims 39, 40, and 43 are amended to correct typographical errors. Applicants submit that no new matter has been introduced, as support for these amendments can be found in the specification and claims as originally filed.

Rejections under 35 U.S.C. § 112, First Paragraph

Claims 30, 31, and 33-48 are rejected under 35 U.S.C. § 112, first paragraph because "[t]he specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims." Office Action at 3. Applicants respectfully traverse this rejection.

The Examiner has stated, "[T]he specification, while being enabling for compounds that inhibit a narrow range of mycobacterium including *tuberculosis*, *bovis* and *avium-intracellulare 'in vitro'*, does not reasonably provide enablement for the treatment of 'any' mycobacterial infection using the full scope of the claimed compounds 'in vivo'" Office Action at 2-3. As

discussed at the interview on February 23, 2007, Applicants have cancelled claims 44 and 45 and have incorporated the subject matter of claim 44 into claim 30.

The Examiner has also stated that, "[T]he 'in vitro' evidence (i.e. biological studies for OSA) set forth in the Parrish et al. rejection is also not commensurate scope with Applicants' current claims/specification...[compounds] 12, 13, and 28-30, are inactive against H37Rv...[compound] 7 with a longer, 18-carbon tail was completely inactive against H37Rv" Office Action at 8-9. As discussed at the interview on February 23, 2007, Applicants have amended claims 30 and 31 to change the definitions of the "R," "Z," and "Y" groups. Applicants note that as amended, the claims do not cover compounds 12, 28, 29, or 30 in the Parrish reference. Applicants respectfully submit that to the extent that any of the claimed compounds are inoperative against a specific strain of tuberculosis such as H37Rv, this does not preclude a claim to a method of treating the sub-genus of mycobacteria recited in the amended claims. *See Capon v. Eshhar*, 418 F.3d 1349, 1359, 76 U.S.P.Q.2d (BNA) 1078 (Fed. Cir. 2005) ("It is not necessary that every permutation within a generally operable invention be effective in order for an inventor to obtain a generic claim, provided that the effect is sufficiently demonstrated to characterize a generic invention.").

The Examiner has cited the Kurashima reference for the proposition that "unlike in the case of Mycobacterium tuberculosis, in vitro sensitivity does not correlate with in vivo sensitivity [for pulmonary mycobacterium avium-intracellulare complex infections]" Office Action at 11. Applicants note that the claims as amended do not include *M. avium-interacellulare*, and respectfully submit that rejection on this basis should be withdrawn. Moreover, Applicants point out that Kurashima states that *in vitro* sensitivity does correlate with *in vivo* sensitivity for Mycobacterium tuberculosis.

Finally, the Examiner states that "Dr. James Dick's statement that '*Mycobacterium chelonae*' is "non-pathogenic" (e.g., see Declaration, note 7) is factually mistaken (e.g., see Guerardel et al., "Structural Study of Lipomannan and Pioarabinomannan from *Mycobacterium chelonae*" J. Biol. Chem. 2002, 277(34), 30635-30648, especially abstract disclosing as an example '*Mycobacterium chelonae*...[is] a fast growing pathogenic mycobacterial species.')" While *Mycobacterium chelonae* is not covered by the claims as amended, Applicants would like to point out that Dr. Dick's statement was based on a narrower definition of "pathogenic" than that used by Guerardel, and therefore, Applicants strongly disagree with the Examiner's contention that the statement in Dr. Dick's Declaration was "factually mistaken."

Accordingly, Applicants respectfully submit that the claims are enabled under 35 U.S.C. § 112, first paragraph, and this rejection should be withdrawn.

Rejections under 35 U.S.C. § 112, Second Paragraph

Claims 30, 31, and 33-48 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. Specifically, the claims are rejected because the phrase "pathogenic mycobacterial infection" is allegedly unclear. Applicants respectfully submit that this rejection is overcome in light of the present amendments and note that the phrase "pathogenic mycobacterial infection" no longer appears in the claims.